CONARDIA, A NEW MOSS GENUS FOR HYPNUM COMPACTUM (HOOK.) C. MÜLL.

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During studies of the Brachytheciaceae of North America (Robinson, 1962) no effort was made to treat the moss once known as Hypnum compactum (Hook.) C. Müll. which was then generally regarded as an Amblystegium. Since that time there has been a growing tendency to resurrect the combination Rhynchostegiella compacta (Hook.) Loeske for the moss and to treat the species as a member of the Brachytheciaceae. Some recent illustrations emphasize the most elongated forms of the operculum but these are still far shorter than the form found in Rhynchostegiella. There has been no evident resistance among bryologists to the recent generic placement in spite of the lack of the primary generic character. It seems time to properly analyse the species and to reassert the belief that there are no true Rhynchostegiella species in North America and only one rather atypical species in tropical America.

In an effort to determine the reasons for the placement of Hypnum compactum in Rhynchostegiella the original publication of Loeske (1910) has been examined. Loeske says only the following in the midst of a commentary in Brachythecium, ". . . Br. densum, das mit Amblystegium compactum (C. Müll.) Br.eur. identisch ist, wie H.N. Dixon nachwies, und zu dem ich auch Eurhynchium ticinense Kindb. als Synonym ziehe. Doch hat Kindberg die Verwandtschaft annähernd am besten erkannt, denn das Moos zeigt mir bei der Vergleichung die meisten Verwandtschaften mit Rhynchostegiellen und ich bezeichne es daher als Rhynchostegiella compacta (C. Müll.). Bei Amblystegium ist das Moos so wenig wie bei Brachythecium zu halten." The Loeske conclusion seems to be based on a superficial impression of the brachytheciaceous nature of the moss and the generic placement amounts to nothing more than putting a small moss in a genus of small mosses.

The genus Rhynchostegiella is notable for the small size of its vegetative parts and for the small capsules on short setae. All species have a long slender rostrate operculum and most have densely papillose setae. Hypnum compactum is also usually a

small moss but has slender smooth setae. The operculum is highly conical or short-acuminate. Often the costa of the leaf and sometimes the adjacent lamina bear rhizoids or propagula, features not found in other species placed in Rhyncostegiella.

Relationships of Hypnum compactum are not clear. The distinctive propagula are not found in other genera of either the Brachytheciaceae or the Amblystegiaceae. The one genus with propagula that has been placed in the Brachytheciaceae, Lepyrodontopsis, is ecostate and has other characters that caused E.G. Britton (1913) to transfer it to the Entodontaceae. The small teeth on the basal leaf margins of Hypnum compactum are reminiscent of teeth in the brachytheciaceous Homalothecium nuttallii (Wils.) Jaeg. but there is nothing else to suggest close relationship. There are rhizoids on the leaves of the brachytheciaceous Tomenthypnum nitens (Hedw.) Loeske but again there is no other reason to closely relate the genus. On the other side rostrate or even highly conical opercula are apparently unknown in the Amblystegiaceae and the operculum of Hypnum compactum is definitely unlike any of the short stub-tipped forms seen in Amblystegium.

I would conclude that Hypnum compactum should be placed in a separate genus and for the family placement I would rely on one of the characters that seems to have served best in the past. The dry capsule of Hypnum compactum is constricted rather strongly below the mouth and the entire lower length is usually narrowed. This is more like the typical form in the Amblystegiaceae but not as strongly curved. In the Brachytheciaceae the dry capsule usually remains rounded in the basal part and often has little or no constriction even at the mouth.

The new genus is named in honor of the late Henry S. Conard whose useful keys to North American mosses are well known.

Conardia H.Robinson, genus novum Amblystegiacearum.

Plantae autoicae pleurocarpae flavovirentes parvae irregulariter ramosae, ramis saepe erectis dense caespitosis, rhizoidis plerumque densis rubescentibus minute papillosis. Folia caulina patentia ovato-lanceolata vel lanceolata ca. 1 mm longa leniter vel valde acuminata margine subserrulata base valde saepe duplo vel reflexe serrata, costis angustis subpercurrentibus subtus saepe rhizoidiferis interdum propaguliferis; propagulis linearibus uniseriatis multiseptatis; cellulis laminarum sublinearibus plerumque 8-10-plo longioribus quam latioribus, cellulis

basilaribus brevioribus oblongis vel rhomboideis, cellulis alaribus paucis subquadratis. Setae 1-3 cm longae laeves, thecae suberectae sine operculo plerumque 1.5-2.0 mm longae oblongae vel subcylindricae in sicco distincte constrictae non arcuatae; annulus distinctus; operculum conicum raro subrostratum; peristomium duplex, ciliis brevibus vel rudimentis. Sporae plerumque 12-14 μ diam.

Species typica: Hypnum compactum (Hook.) C.Müll.

The genus contains the following single species.

Conardia compacta (Hook.) H.Robinson, comb. nov.
Hypnum serpens var. compactum Hook. in Drummond, Musci Bor. Amer. ed. 1: n. 188. 1828. Hypnum compactum (Hook.) C.Müll., Syn. 2: 408. 1851. Rhynchostegiella compacta (Hook.) Loeske, Stud. Morph. Syst. Laubm. 182. 1910.

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Robinson, H. 1962. Generic revisions of North American Brachytheciaceae. The Bryologist 65: 73-146.